

Application No. 10/021,602
Amendment dated December 28, 2006
Reply to Office Action of August 28, 2006

Remarks

Applicants have amended claim 5. Claims 5 and 44-57 remain in the application, and Applicants respectfully request reconsideration of the amended claims.

Applicants appreciate the opportunity to conduct interviews with the Examiner on December 13 and December 19 during which the claimed features of the spacers being on the edges of the cover slip and the area of the hybridization chamber were discussed with respect to the cited references.

Claim 5 is amended to more specifically recite that the spacers extend along and are contiguous with longitudinal or lengthwise edges of the cover slip. This structure is clearly shown in Fig. 1 and described in the first two lines of page 7.

Claim 5 was previously amended to recite an area between the spacer segments of at least 500 square mm. The specification at page 14, lines 26-27 recites sizes of known cover slips. However, referring to page 6, lines 26-30, the disclosed cover slip 22 is recited as having an area that may be smaller than, equal to, or larger than a standard microscope slide, that is, 25 mm x 75 mm, which is being used as a substrate. Further, at page 9, lines 11-14, a desirability of maximizing an area of the hybridization chamber is recited; however, within the above general guidelines, there will be a range of areas for the cover slip that is application dependent, page 6, lines 29-30. In addition, the specification, at page 8, lines 3-5, recites that a cover glass made from 1 mm microscope slide glass is probably most often used. Such a thickness provides a desired beam stiffness for all sizes of cover glass commercially available as an m-series lifter slip, see cover slips at <http://www.eriesci.com/index.aspx>. In view of the above, Applicants submit that there is adequate support in the specification for the recitation of an area of at least 500 square mm.

Claim 5 also restores language that requires the thickness to be sufficient to prevent adhesion forces from changing the height of the hybridization chamber between the cover slip and the substrate. This language is supported at page 8, lines 5-26 and further

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supports the importance of the above limitations of thickness and area. The following discussion is with respect to the amended claim 5.

Claims 5 and 44-57 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. RE 35,589 to Fisch in view of U.S. Patent No. 4,171,866 to Tolles. The rejection is identical to a prior rejection, and Applicants' response in the Amendment and Response dated June 16, 2006 are applicable and incorporated by reference herein.

In order to establish a *prima facie* case of obviousness, first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior references, when combined, must teach or suggest all the claim limitations.

Applicants submit that a *prima facie* case of obviousness is not made because the cited references in combination do not teach, suggest or motivate one to provide a hybridization apparatus having the elements recited in amended claim 5.

First, neither reference teaches, suggests or motivates one to provide "a pair of spacer segments attached to the bottom surface of the cover slip, each of the pair of spacer segments extending substantially contiguously with a full length of a different one of the opposed longitudinal edges..." Placing the spacer segments along the longitudinal edges has an advantage of maximizing an area available for a hybridization chamber.

Second, neither reference teaches, suggests or motivates one to provide "a pair of spacer segments attached to the bottom surface of the cover slip...forming a hybridization chamber between the spacer segments, the bottom surface of the cover slip and the top surface of the substrate..." Applicants submit that there is nothing in the structure or use of the hemocytometers of the cited references that would lead one skilled in the art to increase the thickness of a hemocytometer cover slip, which would diminish the optical compatibility with microscopic examination that is required with a hemocytometer. Further, the cover glass of the present invention is only used to form a hybridization chamber and is not used to cover the specimen during microscopic examination. There is no teaching

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within the present application regarding examination or observation of the specimen by microscopic examination through the cover glass.

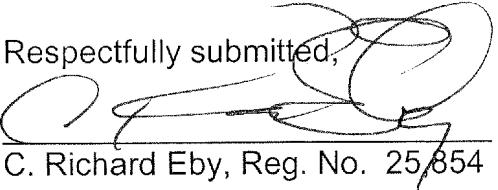
Third, the Office Action states that it would have been obvious to use the "spacers of Tolles in the device of Fisch to allow the sample to be inserted into the chamber of the slide while the cover slip is attached to the slide." While the references can be combined to provide a hemocytometer, the combination does not provide a hybridization chamber as required by claim 1. At page 10, lines 3-8, with a hybridization chamber, a tissue sample is first immobilized on a slide, a cover slip is then placed over the tissue sample and slide, and thereafter, a hybridization solution is introduced into the hybridization chamber. Thus, contrary to the use of a hemocytometer in which the sample is inserted between the slide and the cover glass, with a hybridization chamber, the sample is placed on the slide prior to the application of the cover glass.

Applicants submit that Fisch and Tolles in combination do not express, suggest or motivate one to provide the structure for a hybridization chamber recited in claim 5. Therefore, Applicants submit that the combination of Fisch and Tolles fails to provide a *prima facie* argument of obviousness, and that claims 5 and 44-57 are patentable and not obvious under 35 U.S.C. §103(a) over Fisch in view of Tolles.

Applicants respectfully submit that the application is now in condition for allowance and reconsideration of the application is respectfully requested. The Examiner is invited to contact the undersigned in order to resolve any outstanding issues and expedite the allowance of this application.

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Applicant does not believe that any fees are due in connection with this submission. However, if such petition is due or any fees are necessary, the commissioner may consider this to be a request for such and charge any necessary fees to Deposit Account No. 23-3000.

Respectfully submitted,

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